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RADIOACTIVE WASTE

Interior's Review of the
Proposed Ward Valley Waste
Site

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Mr. Chairman and Members of the Committee:

We are pleased to be here today to testify on the proposed transfer of federal land in Ward Valley, California to the state for use as a site for the disposal of commercially generated low-level radioactive waste. In February 1996, the Department of the Interior announced that before it would decide on transferring the land, it would conduct additional tests at the site and prepare a second supplement to an earlier environmental impact statement.

Our testimony is based on our report on Ward Valley,¹ and will discuss (1) what sources of information Interior relied on in deciding to prepare a second supplemental statement and in selecting issues to address in the supplement, (2) whether the selected issues had been considered in earlier state or federal proceedings and, if so, whether they are being reconsidered on the basis of significant new information, and (3) what Interior's underlying reasons were for preparing the supplement.

In summary, we found the following:

- Interior cited (1) a May 1995 report on the Ward Valley site by the National Academy of Sciences and (2) information developed by its U.S. Geological Survey in 1994 and 1995 about the migration of radioactive elements in the soil from a former disposal facility at Beatty, Nevada, as its basis for preparing the second supplement. It also stated that it would address “nearby Indian sacred sites” in the supplement. Later, after obtaining and analyzing information from the public, including environmental groups, Native Americans, and others, Interior decided to address 10 more issues in the supplement and to expand the issue of sacred Indian sites to include a variety of issues pertaining to Native Americans.
- Eleven of the 13 issues that Interior is addressing in the second supplement had been considered in California's licensing process and in previous environmental impact statements prepared by the state and Interior's Bureau of Land Management. The other two issues—the findings and recommendations of the Academy and the information on the Beatty facility—are new.
- The reasons cited by Interior for preparing a second supplement were an impasse with California over land-transfer conditions and the 5 years that had passed since the original environmental impact statement was issued in April 1991. Two other reasons, however, have shaped Interior's actions

¹Radioactive Waste: Interior's Continuing Review of the Proposed Transfer of the Ward Valley Waste Site (GAO/RCED-97-184, July 15, 1997).

on the Ward Valley issue over the last several years. Specifically, Interior believes that it should provide a forum for resolving public concerns and independently determine if the site is suitable for a disposal facility.

It should be noted, Mr. Chairman, that California has met all of the state's procedural and substantive requirements for licensing the proposed facility. Consequently, the state and US Ecology—the company licensed by the state to construct and operate the disposal facility—have sued Interior to determine, among other things, if Interior exceeded its authority regarding radiological safety matters, such as independently deciding on the site's suitability. Thus, whether or not an independent determination of the site's suitability is within Interior's discretion will be decided in the courts.

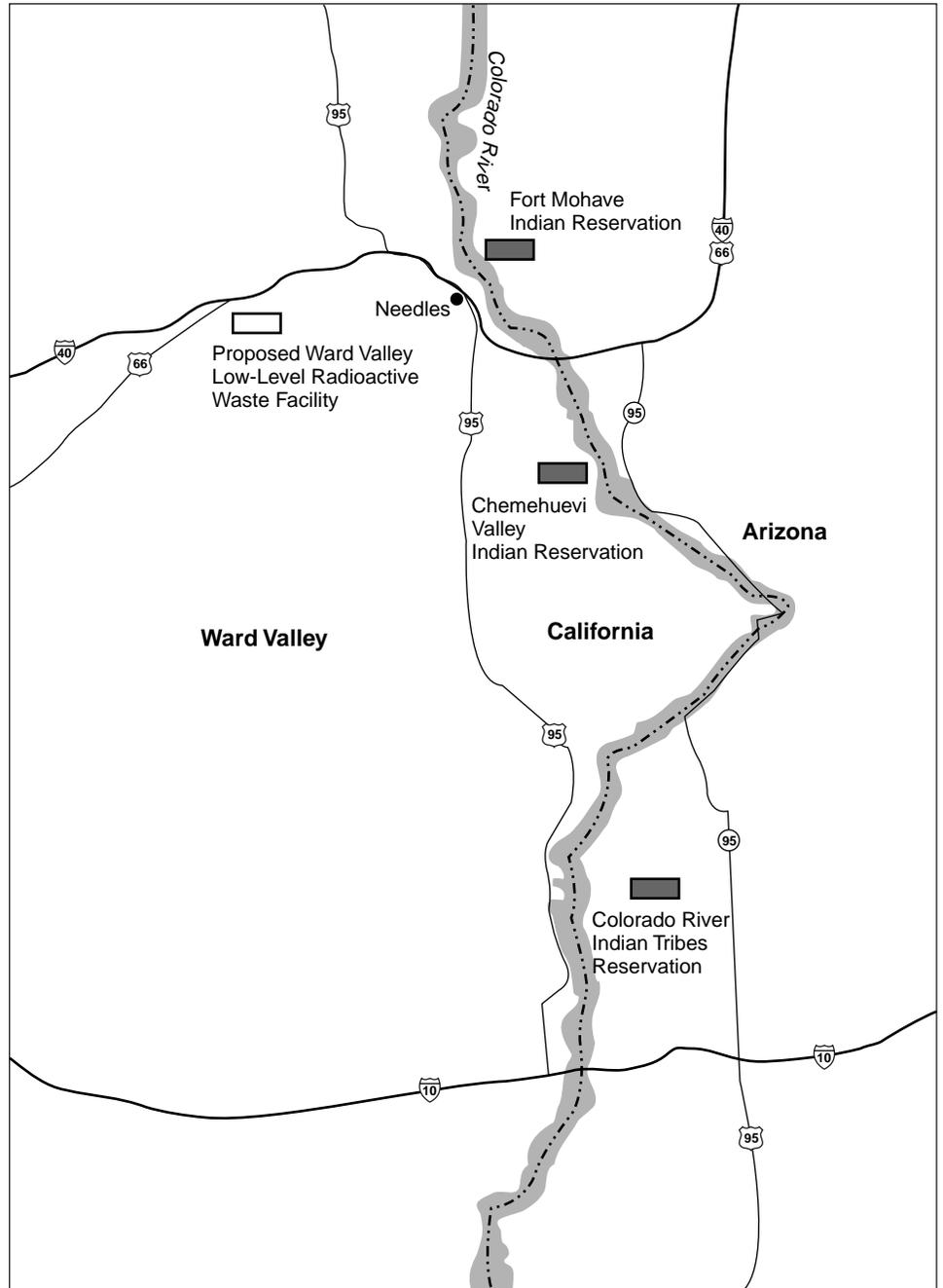
Background

The Low-Level Radioactive Waste Policy Act of 1980, as amended in 1985, made states responsible for disposing of commercially generated low-level radioactive waste. Consequently, in 1987 Arizona, California, North Dakota, and South Dakota entered into a compact in which California agreed to develop a disposal facility that would serve the needs of waste generators in the four states. The Congress ratified the compact in 1988.

California, the only state since 1980 to have authorized the construction and operation of a disposal facility, is responsible for licensing and regulating its disposal facility. As authorized by the Atomic Energy Act of 1954, as amended, the Atomic Energy Commission (a predecessor to the Nuclear Regulatory Commission [NRC]) relinquished to the state in 1962 a significant portion of the Commission's authority to regulate radioactive materials within the state, including the disposal of low-level radioactive waste. The state incorporated NRC's criteria for siting and regulating low-level waste disposal facilities into the state's regulations.

In 1985, California named US Ecology its "license designee" and authorized the company to screen and select a potential site for a disposal facility, to investigate its suitability, and to construct and operate the facility as licensed and regulated by the state. After evaluating potential sites, a 1,000-acre site in Ward Valley in the Mojave Desert was selected. (See fig. 1.)

Figure 1: Map of Ward Valley Area



About 70 of the 1,000 acres would be used for the trenches containing the disposed waste. Almost all of the remaining area would constitute a buffer zone.

In April 1991 Interior's Bureau of Land Management, which manages the land, and the state jointly issued an environmental impact statement concluding that the proposed facility would not cause significant adverse environmental effects. The statement is required as part of the record for the Secretary of the Interior's land-transfer decision.

In July 1992, California asked Interior to sell the Ward Valley site to the state under authority granted to the Secretary by the Federal Land Policy and Management Act of 1976 (FLPMA). Among other things, this act authorizes the Secretary to transfer public land by direct sale upon finding that the transfer would serve important public objectives that cannot be achieved elsewhere and that outweigh other public objectives and values served by retaining federal ownership of the land. After making such a finding, the land transfer must be made on terms that the Secretary deems are necessary to ensure proper land use and the protection of the public interest. After considering the environmental impacts of a licensed disposal facility at the site, the outgoing Secretary decided in January 1993 to sell the land as requested. Acting for the state, US Ecology then paid Interior \$500,000 for the land.

The outgoing Secretary's decision was immediately challenged in federal court on the basis of Interior's alleged noncompliance with FLPMA and the National Environmental Policy Act (NEPA) and alleged failure to protect native desert tortoises under the Endangered Species Act. To settle the lawsuits and to assure himself that the proposed land transfer would comply with applicable federal laws, the incoming Secretary rescinded the earlier land-transfer decision and returned US Ecology's payment. Meanwhile, in September 1993, California issued a license to US Ecology, contingent on transfer of the land to the state, to construct and operate the disposal facility. Legal challenges to the state's licensing action were denied by the state's courts.

From 1993 until 1996 the Secretary deferred the land-transfer decision while (1) the Bureau completed a first supplement to the April 1991 environmental impact statement, (2) the National Academy of Sciences reviewed seven technical issues related to the Ward Valley site, and (3) Interior negotiated, with the state, the terms of a public hearing on the proposed facility and the land-transfer agreement. The land-transfer

negotiations reached an impasse in late 1995 over the issue of Interior's authority to enforce the state's compliance with the Academy's recommendations in court. Then, in February 1996 Interior announced that it would prepare a second supplement to the environmental impact statement and conduct tests that the Academy had recommended. Interior expected these activities to take about a year to complete; however, Interior has not begun preparing the supplement or conducting the tests.

Interior Primarily Relied on Scientific Reports and Public Concerns in Deciding on a Second Supplement

When Interior announced in February 1996 that it would prepare the second supplement, it cited the Academy's May 1995 report and new information about the migration of radioactive elements in the soil from the former disposal facility at Beatty as its basis for preparing the supplement. Although Interior also said it would address "nearby Indian sacred sites" in the supplement, it did not identify any such sites or sources of information on this issue. Thereafter, Interior relied on information obtained from the public, including environmental groups, Native Americans, and others, to select 10 more issues to address in the supplement and to expand the issue of sacred Indian sites to include a variety of issues pertaining to Native Americans.

Report of the National Academy of Sciences

In March 1994, the Secretary asked the Academy to study seven radiological safety and environmental concerns about the proposed Ward Valley facility that were raised by three scientists employed by the Geological Survey. The scientists were particularly concerned about the potential for (1) water to flow into the trenches containing the waste, (2) radioactive materials to move down through the unsaturated soil to the water table, and (3) a connection between the local groundwater and the Colorado River. In a May 1995 report, a 17-member committee of the Academy concluded that the occurrence of any of these three situations is unlikely. Two committee members, however, disagreed with the majority's conclusion that the movement of radioactive elements to the water table is "highly unlikely." The Academy added that the potential effect on water quality of any contaminants that might reach the Colorado River would be insignificant.

Among other things, however, the Academy recommended that additional measurements at the site be made to explain why tritium had apparently been detected about 100 feet beneath the surface of Ward Valley during

the site's investigation.² The unexpected measurement of tritium at this depth raised questions about how quickly radioactive elements might migrate from the disposal facility to the groundwater. The Academy concluded that inappropriate sampling procedures probably introduced atmospheric tritium into the soil samples.

Fifteen committee members concluded that the tritium tests could be done during the facility's construction because the purpose of the tests was to improve baseline information for the long-term monitoring of the site rather than to resolve questions about the site's suitability for a disposal facility. Two members concluded that the tests should be completed in time to use the results in a final decision on the site's suitability as a disposal facility.

New Information on the Beatty Facility

In 1994 and 1995, the Geological Survey detected tritium and another radioactive element in the soil adjacent to a disposal facility for low-level radioactive waste located at Beatty, Nevada. This facility had operated from 1962 until Nevada closed it after 1992. US Ecology began operating the facility in 1981. While conducting research next to the Beatty facility, the Survey detected radioactive elements in concentrations well above natural background levels. The Survey attributed this situation to disposal practices at Beatty, such as disposing of liquid radioactive waste, that are now prohibited.

The Survey added that it is doubtful that the distribution of the radioactive elements leaking from the site and their movement through the ground over time will ever be understood because of incomplete records of the disposal of liquid radioactive wastes. Therefore, the Survey concluded, extrapolations of the information from Beatty to the proposed Ward Valley facility are too tenuous to have much scientific value because of the uncertainties about how radioactive elements at Beatty are transported and because liquid wastes cannot be buried at Ward Valley. The Survey concluded that the findings of tritium near Beatty do not help explain the measurements of tritium at Ward Valley.

Information Obtained From the Public

Interior relied on the views of the public to add 10 more issues to address in the second supplement and to expand another issue—"nearby Indian sacred sites"—into a broader review of Native American issues. For

²Tritium is a radioactive form of hydrogen that is produced by atmospheric nuclear weapons tests and carried to the ground by rain.

example, before Interior announced that it would prepare a second supplement, an environmental group—the Committee to Bridge the Gap—had already requested that Interior prepare a supplement addressing the Academy’s report, the Beatty facility, and four other issues that Interior eventually selected: (1) the potential pathways of waste to the groundwater and then to the Colorado River; (2) the types, quantities, and sources of waste to be disposed of; (3) the recent financial troubles of US Ecology; and (4) protection of the desert tortoise.

After Interior’s February 1996 announcement that it would prepare a second supplement, the Bureau obtained and summarized public comments and recommended to Interior’s Deputy Secretary that 10 issues be addressed in the supplement. Four of the 10 issues were similar to those that the Committee to Bridge the Gap had already raised. Subsequently, the Deputy Secretary approved 13 issues to be addressed in the second supplement. In addition to the Academy’s report, the new information on the Beatty facility, and the four other issues that the Committee to Bridge the Gap had recommended, Interior expanded the scope of the Indian sacred sites issue and added (1) the movement of radioactive elements in the soil, (2) alternative methods of disposal, (3) the potential introduction of nonnative plants, (4) waste transportation, (5) the state’s long-term obligations, and (6) the public health impacts of operating the disposal facility.

Most of the Current Issues Were Previously Considered

Except for the Academy’s report and the new information about the Beatty facility, all of the issues that Interior will address in the second supplement had been considered earlier in the state’s licensing proceeding; in the state’s and the Bureau’s joint environmental impact statement; and in the Bureau’s first supplement of September 1993. According to the Council on Environmental Quality’s regulations for implementing NEPA, however, when a federal agency has already addressed issues in an environmental impact statement, it must prepare a supplement to the statement when significant new circumstances or information relevant to environmental concerns has become available. An agency may also prepare a supplement when it determines that doing so will further the purposes of NEPA.

Interior’s announcement that it would prepare the second supplement did not state that the Academy’s report and the new information on the Beatty facility constituted significant new circumstances or information that would require Interior to prepare a supplement. According to Interior, its

decision to prepare the statement had been prompted by (1) the state's rejection of Interior's proposed land-transfer conditions and (2) the passage of 5 years since the initial environmental impact statement had been prepared.

Other evidence indicates that Interior did not initially consider the Academy's report and the new information on Beatty significant enough to require a supplement. For example, the Secretary's public statement on the Academy's report said that the report "provides a qualified clean bill of health in relation to concerns about the site." According to the Secretary, with appropriate land-transfer conditions based on the recommendations of that report, the Secretary was "now confident that the transfer of the land is in the public interest." Also, when Interior announced that it would prepare the second supplement, it stated that the Survey's new information on the Beatty site indicated "little similarity with Ward Valley" but underscored the need for continued scientific monitoring at both locations.

Interior also did not compare the public comments it received with the state's licensing record or the previous environmental statements to provide a basis for identifying "significant" new circumstances or information. According to the Bureau's Sacramento officials who are preparing the second supplement, whether or not there was any "new" information was not important to the Bureau's deliberations about what issues should or should not be addressed in the supplement. For many of the issues, they said, what was "new" was the public's concerns about the issues.

The effect of the Ward Valley facility on Native Americans in the region is one example of an issue that had been addressed earlier by the state and the Bureau. In part, however, Interior plans to address Native American issues in the second supplement because of two recent Executive orders.³ One order requires federal agencies to accommodate access to and the ceremonial use of Indian sacred sites and avoid adversely affecting the integrity of such sites. The second order requires federal agencies to make "environmental justice" for low-income and minority populations (including Indian tribes) a part of their missions by identifying and addressing, as appropriate, the relatively high and adverse human health or environmental effects of their activities on these groups.

³Exec. Order No. 13007 (Accommodation of Sacred Sites, May 24, 1996) and Exec. Order No. 12893, (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, (Feb. 11, 1994).

To a significant degree, the state and the Bureau had addressed Native American issues in the site selection process, the state's licensing proceeding, and the 1991 environmental impact statement. The specific consultation steps, according to the 1991 statement, included an archaeological survey of the site with Native American participation. This survey found that no significant cultural resources were present at the site. In addition, US Ecology contacted the Indian tribes in the region to evaluate the potential cultural impacts of a regional nature. A site-specific walkabout by tribal representatives did not identify any unique cultural resources. According to US Ecology's license application, that part of Ward Valley where the proposed disposal site is located had once been disturbed by military tank maneuvers. Also, electric-power transmission lines cross the site, and a pit used to supply rock for highway construction is nearby. As recently as February 1997, The Director of the Bureau's Sacramento office stated in a letter to the Environmental Protection Agency that the affected tribes were fully represented and consulted in the scoping and descriptive phases of the 1991 environmental impact statement.

Interior plans to assess compliance with the two Executive orders in the second supplement by addressing the effects that a disposal facility at Ward Valley could have on Native Americans' religious and cultural values, tourism, agricultural cultivation, and future economic developments, such as hotels and gambling casinos, along the Colorado River. The river is about 20 miles east of the Ward Valley site at its closest point. In commenting on a draft of our report, Interior also said that it will address the environmental justice implications to low-income and minority populations that may live near where waste is stored of not transferring the Ward Valley site to the state.

Interior's Reasons for the Supplement Are to Provide a Public Forum and Determine Site Suitability

The reasons Interior gave for its decision to prepare a second supplement were the impasse over land-transfer conditions and the age of the original environmental impact statement. Two other reasons for the second supplement, however, have shaped Interior's actions on the Ward Valley issue for several years; specifically, Interior believes that it should provide a forum for resolving public concerns and independently determine if the site is suitable for a disposal facility. In contrast, California and US Ecology believe that (1) the state—not Interior—has the authority, implementing criteria, and expertise for determining if the site is suitable and (2) Interior had completed all essential requirements for deciding on the land transfer in January 1993. Consequently, California and US

Ecology have sued Interior over, among other things, whether Interior has exceeded its authority with respect to radiological safety issues. The lawsuits are pending.

Supplemental Statement Substitutes for a Formal Hearing

Interior's regulations for transferring federal land under FLPMA do not encourage, require, or prohibit public hearings on proposed transfers. Nevertheless, Interior wanted the state to conduct a formal public hearing on the Ward Valley facility because of the controversy over the facility. According to Interior, the second supplement and tritium tests will fulfill its responsibility to assure the public that health and safety concerns are adequately addressed.

California conducted a public hearing as a part of its licensing procedures for the Ward Valley facility. The applicable state laws and regulations required the state to conduct a hearing in which the public makes brief oral statements and provide written comments. All comments were to be considered by the state and included in the written licensing record. Several individuals and groups unsuccessfully urged the state to conduct a public hearing on the license application using formal, trial-type procedures. However, a state appellate court found that the state had met the requirements of state law and regulations and an appeal of the court's decision was denied.

California issued a license to US Ecology to build and operate a disposal facility for low-level radioactive waste at Ward Valley in accordance with the state's authority under the Atomic Energy Act of 1954 and related state laws and regulations. Interior, however, has not accepted the results of the state's licensing proceeding as an adequate basis for Interior to make a land-transfer decision. For example, in an August 11, 1993, letter to the governor of California, Interior's Secretary asked the state to conduct a formal public hearing as part of a credible process for determining if the site is appropriate so the Secretary can make a land-transfer decision.

Interior Wants to Independently Determine If Ward Valley Is Suitable for a Disposal Facility

FLPMA requires the Secretary of the Interior to ensure that federal lands transferred to other parties are properly used and protect the public interest. California, on the other hand, is responsible for licensing and regulating the Ward Valley facility according to the state's laws and regulations, which are intended to adequately protect public health and safety. Where the respective responsibilities of Interior and the state overlap, if at all, has been an uncertain matter.

The former Secretary, in his January 1993 decision (subsequently rescinded) to transfer the land, accepted the state's and US Ecology's technical findings supporting the state's licensing decision and accepted that the proposed facility would be licensed by the state according to all applicable federal and state laws and regulations. In contrast, the current Secretary has asserted more overlap between Interior's and the state's respective responsibilities. For example, when the Secretary requested the state to conduct a formal public hearing, he said the hearing should focus on the issue of the migration of radionuclides from the site because that issue directly relates to his ". . . responsibility under federal law regarding the suitability of the site. . . ."

Setting aside the issue of authority, Interior has neither the criteria nor the technical expertise to independently assess the suitability of the site from a radiological safety perspective. Moreover, Interior had not sought advice or assistance on the suitability of the site from NRC or, until recently, the Department of Energy (DOE), which have such expertise.

Interior has not sought NRC's assistance in addressing issues about the suitability of the Ward Valley site for a disposal facility. In 1993, the Bureau verbally requested NRC's views on the adequacy of California's program for regulating radioactive materials, including the Ward Valley facility. NRC responded that it periodically reviews California's regulatory program to determine, as required by the Atomic Energy Act, if the state's program is compatible with NRC's program for regulating radioactive materials in states that have not agreed to assume this responsibility. On the basis of these periodic reviews, NRC said that it had concluded that the state has a highly effective regulatory program for low-level radioactive waste and is capable of conducting an effective and thorough review of US Ecology's license application for the Ward Valley facility.

DOE had no role on the Ward Valley facility until February 1996, when Interior decided to perform the tritium tests at the site. Thereafter, DOE and Interior negotiated conditions under which Interior would use facilities at DOE's Lawrence Livermore National Laboratory to conduct one technical part of the tests. Interior officials subsequently told us that DOE's role in the testing has evolved into a partnership with Interior in setting up the test arrangements. The Interior officials also pointed out that federal agencies such as NRC and the Environmental Protection Agency are expected to comment on the second supplement.

California and US Ecology do not agree that Interior is authorized to independently determine if the Ward Valley site is suitable for a disposal facility. Their position is that the regulation of radiological safety issues, such as migration of radionuclides, is the state's responsibility because of the state's agreement with NRC under the Atomic Energy Act. Therefore, they argue, radiological safety matters are outside of Interior's authority and expertise. As discussed earlier, the state and US Ecology have sued Interior. They have asked the court to order Interior to complete the sale of the land and declare that Interior had exceeded its authority with respect to protecting the public against radiation hazards. Thus, the courts ultimately will decide the legality of, among other issues raised by the litigation, Interior's position that it must independently determine if the site is suitable for a disposal facility.

Conclusion

In conclusion, the task of developing new facilities for disposing of commercially generated low-level radioactive waste has proven more difficult than imagined when the Congress gave states this responsibility 17 years ago. Because no state has yet developed a new facility, the actions in California are viewed as an indicator of whether the current national disposal policy can be successful. In the case of Ward Valley, however, Interior has not accepted the state's findings in the area of radiological safety as adequate to permit Interior to decide on the land transfer. Instead, Interior has decided that it must independently determine if the site is suitable for a disposal facility. Whether an independent determination is within Interior's discretion will be decided in the courts. Setting this legal question aside, most of the substantive issues that the public has raised to Interior for its consideration have already been addressed by the state and by the Bureau. Moreover, subsequent new information, such as the Academy's report, generally favors the proposed facility.

Mr. Chairman, this concludes our prepared statement. We would be happy to respond to any questions that you or Members of the Committee may have.

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